

Market Microstructure - Documentation

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Chapter 1

Introduction

Chapter 2

Exploratory Data Analysis

2.1 Overview

2.1.1 Data Origin

The data is sourced from Wharton Research Data Services (WRDS), specifically the datasets relating to trade and quotes (TAQ) by the New York Stock Exchange (NYSE). The database provides transaction information at the intraday level covering more than 10'000 stocks listed on 16 major American exchanges. This also includes ETF-specific data, which will be used in this analysis. Within TAQ, the datasets relating to "Consolidated Quotes" and "Consolidated Trades" were used.

For the analysis, the following FOMC-dates and non-FOMC dates (acting as controls) were analysed:

Table 2.1: Analysis Dates: FOMC and Control Days (2025)

FOMC Date	Control Date
2025-01-29	2025-02-04
2025-03-19 (Economic Projections)	2025-03-27
2025-05-07	2025-05-20
2025-06-18 (Economic Projections)	2025-06-23
2025-07-30	2025-08-04
2025-09-29	2025-10-03
2025-10-29 (Economic Projections)	2025-11-05

Within TAQ, the SPDR S&P 500 Trust ETF (Ticker: "SPY") was analysed. The selected time-period started from 13:00:00 and ended at 16:00:00. The first part of the period, from 13:00:00 to 14:25:00 relates to the release of the written statement after each meeting whilst the second period, from 14:25:00 to 16:00:00 is associated with the speech by the chairman of the federal reserve system and the subsequent questions and answers session.

2.1.2 Data Description

For the analysis, the following variables were downloaded as a csv-file:

the exact time stamp is added automatically by the database.

Table 2.2: Variable Definitions from TAQ

Variable	Description
<i>Consolidated Quotes</i>	
BID	Bid price
BIDSIZ	Bid size (in units of trade)
ASK	Ask price
ASKSIZ	Ask size (in units of trade)
<i>Consolidated Trades</i>	
SIZE	Volume of trade
PRICE	Price of trade
TR_ID	Trade ID

Chapter 3

Methodology

3.1 Kyle-regressions

3.2 VPIN

Chapter 4

Output

4.1 Overview

Appendix A

Overview